

# Aspirin, Ibuprofen Might Boost Risk of Certain Breast Cancers

TUESDAY, May 31 (HealthDay News) -- Daily use of aspirin for at least five years increases the risk of one type of breast cancer but reduces the risk of another, California researchers report.

Long-term, daily use of ibuprofen was also associated with an increased breast cancer risk, the scientists found.

However, both the study author and a second expert agree this area of research needs much more investigation, and women should not change their medication use based on these results.

The findings do seem to conflict with previous studies about aspirin and breast cancer risk, some of which have found a protective effect, said study author Sarah F. Marshall, a researcher at the University of Southern California, Los Angeles. Her report appears in the June 1 issue of the *Journal of the National Cancer Institute*.

Part of the explanation could lie in the fact that some studies didn't separate out subtypes of breast cancer, she said.

In their study, Marshall and her colleagues analyzed data on more than 114,000 women who were part of the California Teachers Study. All the women were between the ages of 22 and 85 and cancer-free when the study began in 1995-1996; they were followed until 2001. During that time, nearly 2,400 of the women were diagnosed with breast cancer in which the malignancy subtype -- based on the preponderance of certain cell receptors -- was identified.

Receptors are part of a cell's molecular structure, according to the American Cancer Society. They recognize certain compounds, such as hormones circulating in the blood, and act as a kind of "welcome mat" for these compounds. Certain tumor cells have very active receptors for estrogen and progesterone, for example.

One of the first steps for any cancer diagnosis is a measurement of hormone-receptor status. Breast tumors that contain estrogen and progesterone receptors are termed ER-positive and PR-positive. Those that don't are called ER-negative and PR-negative. Knowing a tumor's receptor status can help doctors plan treatment.

"Overall, we found no association between aspirin and breast cancer risk," Marshall said. "But long-term [five years or longer] daily use of aspirin led to an increased risk of one subgroup of cancer -- ER/PR negative."

Long-term, daily aspirin use increased the risk of ER-PR negative breast cancer by about 80 percent, she said. Those who took aspirin daily for five or more years had a 20 percent reduction in ER/PR positive tumors, compared to those not using it regularly, she found.

And ibuprofen use daily for five years or more was associated with a 50 percent increased risk of breast cancer, she added.

Previous studies have found aspirin to be generally protective against breast cancer. According to Marshall, the theory has been that aspirin blocks a gene expressing the cox 2 enzyme. "Cox 2 in a tumor will increase the estrogen production, which makes the tumor grow," she explained.

Another expert, Dr. Rowan T. Chlebowski, a medical oncologist at the Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center, was co-author of study published in 2003 in *Cancer Research*. That study found regular use of aspirin or ibuprofen had a protective effect when it came to preventing breast cancers.

In that study -- which evaluated more than 80,000 participants in the Women's Health Initiative study -- Chlebowki's team found that women who took two or more tablets of the drugs per week for 10 or more years reduced their risk for breast cancer by 28 percent. But the study did not focus on specific disease subtypes, he said, or evaluate aspirin and ibuprofen separately.

After reviewing the new study, he said, "it's difficult to figure out if it conflicts or doesn't with other studies. Breast cancer isn't just one disease."

According to Chlebowski, the take-home point of the new research is that investigators should begin looking more closely at the subtypes of breast cancer and how lifestyle and habits affect their development.

For the time being, women definitely should not alter their aspirin or ibuprofen use based on this research, Marshall said. As with any drug, they should ask their doctor before taking either of these pain relievers on a regular basis, however.